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Johnson et al.

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(54) **DIVERSITY ANTENNA SYSTEM FOR LAN COMMUNICATION SYSTEM**

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(58) **Field of Search** **343/700 MS, 702, 343/793, 794, 795, 820, 822, 846, 810**

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(57) **ABSTRACT**

A diversity antenna structure for a wireless communication device for receiving and transmitting communication signals is provided. The antenna structure including a dielectric substrate defining a pair of major surfaces and having a conductive reflector element disposed upon one of the major surfaces of the dielectric substrate, said reflector element being operatively coupled to a pair of shield conductors of coax feedlines. The antenna further including a plurality of serpentine radiator elements conductively coupled to the reflector element. The antenna assembly also including a pair of transmission lines disposed upon the other major surface of the dielectric substrate substantially opposite the reflector element, each of the pair of transmission lines coupled to one of the center conductors of the coax feedlines, and a pair of conductive balun structures disposed upon the dielectric substrate and coupled to the pair of transmission lines, the baluns being disposed substantially opposite the plurality of serpentine radiators.

17 Claims, 4 Drawing Sheets

